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International Conference on Grammatical Inference 2016: Preface

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These proceedings contains the works that have been presented at the 13th International Conference on Grammatical Inference (ICGI), held in Delft the Netherlands in October 5-7 2016. Out of the 15 full papers, 10 were accepted for publication in the proceedings and presentation at the conference. In addition to these works, 9 extended abstract were accepted for a short presentation at the conference. The extended abstract are not included in the proceedings and can be found online at <http://icgi2016.tudelft.nl>, as well as the slides of all presentations. The proceedings contain a diverse range of topics in grammatical inference, such as: an easy to use spectral learning toolbox in Python containing several variants of the classic spectral learning algorithm, new approaches for estimating whether a grammar satisfies the k-finite kernel and context properties, properties of context-free grammars, and results on the identification in the limit of dependency grammars. There are also works with new results in active learning with helpful labels, learning from infinite alphabets, learning tree transducers, fast frequent pattern discovery, and model theory.

The conference program also included three keynotes from top researchers in the field. Hendrik Blockeel from KU Leuven presented his results and ideas on learning relational grounded languages. Borja Balle from Lancaster University presented his and Mehryar Mohris results on learning weighted automata, including several data-dependent learning guarantees based on Rademacher complexity. Valentin Spitkovsky demonstrated how one can learn the hierarchical structure of a language in an unsupervised fashion from free-form natural language.

Finally, there was the SPiCe international sequence prediction challenge workshop, where both organizers and participants presented their works and methods used during the competition held in July 2016. Papers describing these methods are also included in the proceedings. We congratulate the winners of the challenge team shib, consisting of Chihiro Shibata and Jeffrey Heinz, who used a new Deep Learning based method.

We would like to express our gratitude to everyone involved in ICGI 2016, including invited speakers, program committee, SPiCe organization, and the local organization consisting of Sandra Wolff, Gaetano Pellegrino, Qin Lin, and us three.

Rick Smetzers, Menno van Zaanen, Sicco Verwer

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